Jordan University of Science and Technology
College of Computer Sciences & Information Technology

Project Title

A project submitted
in partial fulfillment of the requirements for the degree of
Bachelor in Software Engineering

by

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Month Year

UNDERTAKING

This is to declare that the project entitled “Project Title” is an original work done by undersigned, in partial fulfillment of the requirements for the degree “Bachelor in Software Engineering” at Software Engineering Department, College of Computer and Information Technology, Jordan University of Science and Technology.

All the analysis, design and system development have been accomplished by the undersigned. Moreover, this project has not been submitted to any other college or university.

Student 1

Student 2

Student 3

Note: sign across your name

ABSTRACT

An abstract in a graduation project is a summary that highlights the project's purpose, methodology, key results, and conclusions.

What to Include:

Introduction – Brief background and problem statement.

Objectives – Main goals of the project.

Motivation – Why your project is needed and how it differs from others.

Users: Who will be using your project (product)

Results – Key findings or outcomes (if any).

Conclusion – Main takeaways and project significance.

It should be **150 words or less** and clearly summarize the project's essence.

ACKNOWLEDGMENT

The acknowledgement is a statement of gratitude for assistance to accomplish the project. It may mention the names of the people the project members want to thank for their support in the project (usually parents, friends, instructors).

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LIST OF ACRONYMS AND ABBREVIATIONS

API	Application Programming Interface
REST	Representational State Transfer WS
RPC	Remote Procedure Call

CHAPTER 1: INTRODUCTION

This chapter comprises background of the project, the reasons for taking it, problems addressed by the project and expected outcomes. A good report starts with an introduction to the title of project. The necessary background information is provided to establish context of the project. The motivation and significance of the project should be highlighted. A crisp problem statement is followed by scope of the project along with any limitation or exclusions. The specific objectives to be achieved should be stated. A roadmap or organization of report concludes the chapter.

1.1 Overview

In this section, you should write about the general review or summary of this project. A project overview, sometimes referred to as a project summary, is a tool that allows you to plan out all the details of the project. Typically done before the project begins, the project overview is the master blueprint for the project as a whole.

1.2 Project Motivation

In this section, you should write about the answer the following questions: What are the reasons behind your choice to develop this project? Why your project is important?, and What is the new idea that have been proposed by this project?

1.3 Problem Statement

In this section you should write about the issues that have been addressed by this project and the conditions to be improved upon. It identifies the gap between current (problem) state and desired (goal) state of a process or product.

1.4 Project Aim and Objectives

Write about the overall purposes of this project, should be clearly and concisely defined. Project objectives are what you plan to achieve by the end of your project. This might include deliverable or more intangible objectives like increasing productivity or motivation. Your project objectives should be attainable, time-bound, specific goals you can measure at the end of your project. In this section you should answer the following questions:

Q1. What is the goal that this project wants to achieve? Q2. How this project can achieve this goal?

1.5 Related Existing Systems

You must provide a survey of existing systems or works that are related to your project. You must also distinguish your project from existing systems.

CHAPTER 2: PLANNING PHASE

2.1 Scope of the project

Scope of the project, the boundaries in other words what is the project going to accomplish. (Context Diagram). you should explain the boundaries, specified features and functions, of this project, external entities (stake holders and other system in the environment, establishes responsibilities for each team member and sets up procedures for how completed work will be verified and approved.

2.2 Project risks and Product risks

Project risks and Product risks that you may face while you doing the project. We mean by risk that any an uncertain event or condition that, if it occurs, has a positive or negative effect on a project's objectives. Risk management is the practice of identifying, evaluating, and preventing or mitigating risks to a project that have the potential to impact the desired outcomes

2.3 Feasibility study

Feasibility study, is this project achievable (doable) financially, technical etc… A feasibility study is an analysis that takes all of a project's relevant factors into account—including economic, technical, legal, and scheduling considerations—to ascertain the likelihood of completing the project successfully.) For an educational project probably the only two categories applicable here are the technical feasibility and schedule feasibility

2.4 Project Schedule

Project Schedule in short, it's a timetable that outlines start and end dates and milestones that must be met for the project to be completed on time.

(You must present this in a GANTT chart, download any application from the net and construct the chart using the application)

2.5 Project Software and Hardware Requirements

List the prerequisites software and hardware requirement of this project such as development tools, external software tools used on the clouds, hardware equipments, etc.

CHAPTER 3: REQUIREMENT ENGINEERING AND ANALYSIS

3.1 Used Techniques For Requirements Collection

Techniques you used to elicit (gather, collect) requirements and sample of it. Collecting requirements is the process of determining, documenting, and managing stakeholder needs & requirements to meet project objectives. In requirement Collection process, the first step is to identify stakeholders' needs. Second, Document these needs & requirements.

3.2 Functional Requirement & Modelling

Functional Requirement (FR) is a description of the service that the software must offer. It describes a software system or its component. A function is nothing but inputs to the software system, its behavior, and outputs.

3.2.1 List of System Functions (Features)

List all features of your system.

3.2.2 Use Case Diagram

Draw all use cases using UML use case diagram.

3.2.3 Use Cases: Description & Details

You must document each Use Case in your Use Case diagram above. Mainly, the main flow of each use case and alternatives.

3.4 Nonfunctional Requirements: Quality & Constriants

Nonfunctional Requirements (NFRs) define system attributes such as security, reliability, performance, maintainability, scalability, and usability. They also serve as constraints or restrictions on the design of the system across the different backlogs.

Table 1 shows an example of how to prepare tables.

Table 1: Table Example

CHAPTER 4: ARCHITECTURE & DESIGN

4.1 Software Architecture

You must use UML models to describe the software architecture. Architecture as defined in IEEE 1471 is the fundamental organization of a system embodied in its components, their relationships to each other, and to the environment, and the principles guiding its design and evolution.

You should provide all diagrams (e.g. component diagrams) to show the architecture subsystems and their interactions.

Figure 1 shows an example of how to prepare figures

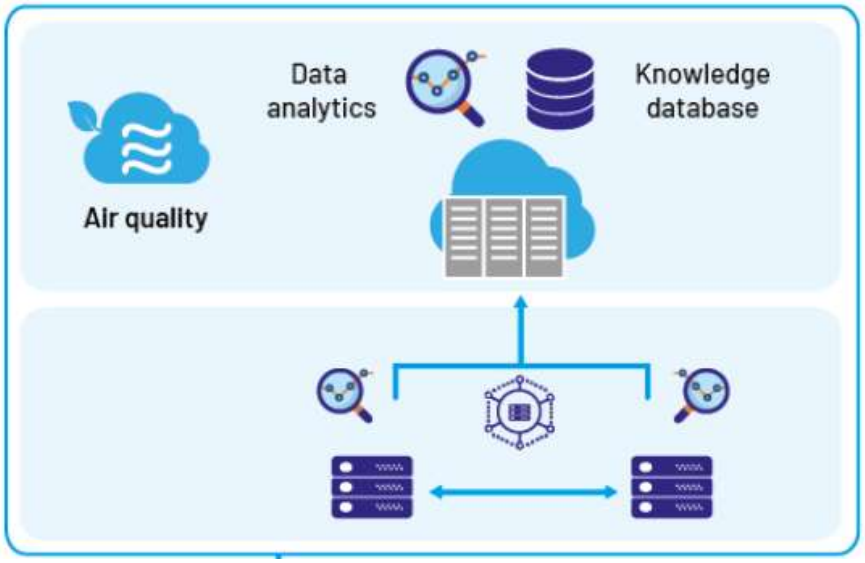

Figure 1: System Overview

4.2 Software Detailed Design

4.2.1 Use Cases Internal Interactions as Sequence Diagrams

This section must provide the UML sequence OR communication diagram for each of the use cases in the requirements chapter.

The diagrams must also show if the kind of communication is synchronous or asynchronous.

You must also explain your diagrams, as needed.

4.2.2 Class Diagram

The class diagram (in UML), including attributes and methods. This diagram must be consistent with your above work.

You must also explain your diagrams, as needed.

4.2.3 Data Storage Organization

You need to provide class diagram to show the data structure in your database.

4.3 User Interface Prototyping (*ONLY FOR PROJECT 1*)

This section should explain all of the already implemented parts of the system and should also provide snapshots for the graphical user interface screens of the system

CHAPTER 5: TESTING PLAN

5.1 Tools

This section should provide overview of all of the testing tools that you are planning to use.

5.2. System Testing (Black box)

You should plan your test cases based on your Use Cases.

5.3. Unit Testing (White box) (ONLY FOR PROJECT 2)

CONCLUSIONS

The conclusion is a required part that closes the document with a summary of the study including the problems found and the proposed solution. Most importantly, it should recommend to the readers the benefits of pursuing the project based on the researcher's analysis.

REFERENCES

[1] Babineau W., Barry P., Furness Z., "Automated Testing within the Joint Training confederation (JTC)", Proceedings of the Fall 1998 Simulation Interoperability Workshop, Orlando, FL, USA. September 1998.

[2] Banks C. "Introduction to Modeling and Simulation". Chapter 1 in book “Modeling and Simulation Fundamentals: Theoretical Underpinnings and Practical Domains”. Catherine Banks, John Sokolowski Editors. Wiley. New Jersey, 2010.

[3] Booth D., Haas H., McCabe F., Newcomer E., Champion M., Ferris C., Orchard D. “Web Services Architecture”. 2004. <http://www.w3.org/TR/ws-arch/>. Accessed November 2010.

APPENDIX-A: USER MANUAL (ONLY FOR PROJECT 2)

This section is ONLY for Project 2.